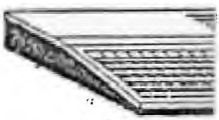
(Ø57) 8806



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LEHIGH 99'ER COMPUTER GROUP

Next meeting: 7:30 PM, Monday
July 18, 1988

Conference Room A-D, Second Floor
Sacred Heart Hospital
4th and Chew Streets
Allentown, Pennsylvania

NEW GAMES

While browsing around at the recent TI computer festival in Roselle Park, N.J. High School, I came across an interesting game. Created by Not-Polyoptics, SPAD XIII, is an advanced and fast-paced flight simulator, modeled after the World War I French Spad fighter. This flight simulator is the best (or at least the fastest) of anything available for the TI, and comparable to some other simpler simulators for other computers. While Spad XIII is a "flight simulator", I would consider it more of a game, although landing does require some practice. One of the major features of this game is its ability to perform aerobatics. Another is the dual joystick/keyboard control. This allows you to control most of the plane's functions (steering & guns) with the joystick, while the keyboard controls views out either side, top, bottom or rear, along with special maneuvers and throttle. In this Mark 2 version of Spad XIII, a Red Baron option is included. This allows more experienced (or extremely daring) pilots to engage a computer-controlled "expert" flyer in the famous Fokker tri-plane. I jumped to this level for extra excitement, and proceeded to be shot down several dozen times. Good flyers can go for 2 hours on one tank of gas.

SPAD XIII is available on a copy protected disk for $20.95 from Quality 99 software, well worth the price, or on cartridge (as Red Baron Flight Simulator) through Triton for $27.95.

Club members may borrow the library copy and see if it's something they'd like to own.

Marc Lieberman

****** COLOR BLEND *******

If you want pastel colors in your programs, make every other dot in your CHAR a one of a zero and then call the background color to be white (16) The program below will change the cyan color to a pastel shade.

```
90 CALL S    'N(16)
100 '  '.  .)R(1,8,16)
110 CALL CHAR(32,"55AA55AA55
AA55AA")
120 CALL CLEAR
130 GOTO 130
```

Try also 14, 12, 10, and 2 as the second number in line 100 for other colors.

John Johnson, Cedar Valley 99'er User Group
(reprinted from the Byte-Line)

A SAD TALE

A TI owner in New Jersey wrote that a thunder storm had destroyed his 4A and expansion system. I asked him if he used a surge suppressor. He responded:

"I am and always have been a strong advocate of the surge protector.

"All my equipment was plugged into a surge suppressor containing an on/off switch. The switch was in the off position. The surge protector was plugged into a wall outlet which is switch controlled. This switch was also in the off position.

"In my opinion, the air was highly charged with static electricity. Via some strange method of conduction, the charge dissipated to the chips. I have never heard of such occurrences. While discussing it with a few neighbors, I learned of VCR's and TV's being damaged during that same storm, none of which were in use at the time.

"How do you protect against this? My friends in the electronic field tell me that you can't. We discussed possibilities such as a "grounded" station but, since most computers have a plastic case, this is not practical (unless you want to open the case and attach a ground lead to the mother board or another central ground).

"When considering the odds against this, it is not worth the effort. Had I known that Murphy's Law would select me, I would have tried it. Too late now."

SPAD XIII - MARK 2
Flight Simulator

First of all, I must thank Jack (our newsletter editor) for allowing me to borrow his remote keyboard for the TI console. This enables me to still use my computer while a back injury forces me to lie flat on my back. This also means that I have had the opportunity to spend many hours flying around (or crashing) in France.

SPAD is an all assembly program by Not-Polyoptics. Required to run it is: 32K memory expansion, 1 disk drive, and extended basic. The program loads quickly for the size of the files being loaded.

Along with the program you get a very well done 20 page manual. It starts off with a brief history of the SPAD, and an introduction to the basics of flight. From there you are taught how to use the controls of your SPAD XIII, and then taken on your first flight. There are also some very fine examples of acrobatic maneuvers that when attempted, end up with a very close view of the ground and the message 'CRASH' displayed (at least when I try them - not enough flying hours yet)!

There are quite a few keyboard controls to learn, but with some time they are easy to use. The key placements were logically made, so the learning process doesn't take too long. There are 9 keys for different views from the cockpit, including one view of the aircraft from 300 feet south and above it. 4 keys are for throttle control, 12 keys for the stick control, 2 keys for rudder control, 2 keys to fire your twin vickers machine guns, a key to drop bombs, a key to kill the program, and a key to bring up a menu of different areas to go directly to. The option to go directly to an area is handy because you seem to fly in 'real-time', that is depending on where you are going, it can actually take 15-20 minutes (or more) to get there from the french airfield. The joystick can also be used to control the stick and fire the machine guns, but you will have only 8 of the 12 stick positions available with the keyboard. But I still find it much easier to fly with the joystick for simpler maneuvers.

There are 4 gauges on the SPAD: a compass, an altitude gauge, an air speed guage, and a fuel guage. You also see the stick position and the throttle position.

The graphics, even though they are all simple line figures, have a very good 3-D effect. (I especially like the reverse view of the runway as I crash upon take-off because of pulling back on the stick too hard). Not only do objects get larger as you get closer and smaller as you get further away, but the objects can be viewed from any side or angle.

The main object of this game is to bomb the German hangars, shoot down observation balloons, and shoot down enemy aircraft, while avoiding enemy flak. This is much easier to say than to do. When you are hit by flak, you will hear a high piched beep. This does not necessarily mean that your plane is damaged, though. The only way to tell if you're damaged is by the performance of the plane. Damage can show up by loss of rudder control, which is not too serious, to loss of aileron control or a hit to the engine. Most damages sustained while I was piloting (at least until I realized them) resulted in a rather harsh and uncontrolled 'landing'. If you know that you are damaged, and your plane can make it, fly back to the French airfield for repairs. You would also return there to refuel and reload your machine guns. While you are there refueling the Germans will be rebuilding their hangars if you have bombed them.

Oh- I almost forgot, when you first load the game, you have the option of having the Red Baron in the game to engage in dogfights with. This is not a nice man. On the few times I played with this option, he was flying over my airfield right at the start of the game, waiting for me to take off. As soon as I did he promptly shot me down.

Overall this is a very good game, my only minor complaint is not being able to see damage to SPAD sooner. Otherwise this game is top-notch, and the price is right too, usually seen for $20-$25.

Brad Snyder
LC99CG

..IMPACT-99..
T.I. Happenings
by Jack Sughrue
Box 459
E Douglas MA 01516

GOOD OLD DAYS

PART III: THE DARK AGES

Were the Dark Ages really awful for all the people who lived through them? I mean, if I were a serf would I never have had any happiness if I truly didn't know about such things as freedom and rights? That's the impression we keep getting from everything we read about the Dark Ages (which were not called that, of course, except in hindsight).

Might we not be living in the Electronic Dark Ages right now? Might not some future generations (free of a flesh body thanks to robotics and the research into Artificial Intelligence) refer to us as primitive; what with degenerating bodies, minds cluttered with trivia and obsessions, politics of death rather than life, slums, homeless, terror, war, famine?

But might WE not think this is a pretty cool age? And we pretty cool cats? And Life a gas? (If not downright totally wicked awesome rad.)

So we come to the eve of orphaning of the 4/A. That infamous date (was it really a Friday the 13th?) will linger on in many memories. The doomsayers leaped from that they thought was an abyss and began chanting, "Dark Ages. Dark Ages. Dark Ages.")

I can clearly recall reading the announcement in the papers and saying, "Forsooth!" (or whatever was the proper expletive in those days), and going home that evening and taking the cover off my console and looking at it for a long time. Like Ol' Dog Tray, 4/A and I had been buddies for a long time. Now it looked like the last roundup.

"Wait a minute!" I thought aloud. "This computer still works. It's still better than an Apple or IBM or Commodore as is. There's no one down in Texas who is going to snap a switch that will shut off the 4/As instantly worldwide. We still have over 2 million owners. We still have software being made, books being written, and, best of all, my user group is still intact."

We're well into the second half of that decade now and we're not dead yet. Not by a long shot.

There have been some remarkable misjudgments by publishers and software and hardware companies. I think, for example, that the biggest mistake came when companies and the user groups eliminated the non-techies. Forgetting about them. Magazines like SMART PROGRAMMER overestimated the number of techies who would be interested in such things as internal schematics or such software as Advanced Diagnostics. Once the market was quickly saturated (some estimate II techiehood as high as 10,000 people worldwide, out of a possible 2 1/2 million owners) that was it. Software, for the most part, was just not being made for the regular user. As a result, lots of software companies died (as did lots of Fairware projects). Pirates were blamed for all these deaths. There was piracy, no doubt about it; but the pirates, for the most part, were the very techies who were a small part of this very small part of the TI community. No non-techie would pirate Advanced Diagnostics, for example, even if they knew how (which would make them a techie), as it would serve no purpose in that person's computer life. Nor would they pirate "Popeye" because they wouldn't have the technical ability to do so.

I think piracy has been overated as a cause of death. Particularly as there is no corpse.

I know of many people in our user group (and this has happened at least nationwide) who left, first, because they believed the doomsayers; second, because they didn't understand the nature of undergrounding; and, finally, because the rest of us had bought RAMdisks and DSDDs and 512s and 6Ks and were getting into Assembly and were discussing GRAMS and GROMS and other such things. Our workshops were turning into boring nightmares of technical jargon and fast-moving flies flashing across multiple screens.

The general feeling of these enthusiastic techies was expressed often and loudly at faires and conferences and club meetings: "If you don't want to join the 20th Century and update your system, then get the hell out!"

As simple as that.

The tape recorder crowd who needed a slower pace or didn't have the money (or desire) for upgrading the system, was left in the lurch.

So were those who only wanted cartridges for software application: PERSONAL RECORD KEEPING, MULTIPLAN, LOGO. The one exception, of course, was TI WRITER.

I remember one meeting where a speaker talked for 45 minutes on Eproms. I didn't know what they were and no one in the audience knew (either before or after). Or cared. Fewer of the old regulars came to the meetings. There was no longer anything for them. Each time we lost a few more members, my heart would sink. Without the user groups, I knew, there would be no TI. The machine would still work, but there would be no community, no sharing, no fellowship.

We tried raffles and other bandaids for a while, but we didn't bring back the oldtimers. And there aren't any newtimers.

Or are there?

The TIs are still in the homes of many people. If only young people could be encouraged to take an interest.

Many of the techies (if they've not already done so) are going to leave the TI for greater techiehood. This is too bad. They left behind some great things. But they left behind (in those cases where there were club

takeovers! many dead groups. Some of us are not technically oriented, nor will we ever be. There are a lot of 99ers out there with tape recorders; a lot of 99ers who have never used FORMAT on their TI WRITERs; a lot of 99ers who wouldn't even care to own a GRAM KRACKER (which is great for them as 64K isn't made anymore). However, we non-techies can be assets to our groups. We can contribute and have lots to contribute.

What did we do in the old days of before and after the orphaning that was so different?

We went to our user groups as a social occasion, a monthly night out. I think that came first for most people. The I/A was our commonality. It was social. We talked and shared and learned. We were all, more or less, in the same boat. Those who knew a bit more than we did helped us. We did not feel excluded.

I went to a large TI group last year with the intent of joining. When I got there I felt very uncomfortable. The members did not introduce themselves, nor did they ask me to "come on over" and chat. Nothing. The meeting was disorganized, but when it settled down, nothing happened. There were no workshops, no plans, no anything. Except for five or six men (a couple rather famous in the TI community) who kind of held sway, loudly cracking inside jokes as one or the other of them talked a little bit about what's on their BBS, about Eproms (Damn Eproms, I say!), about how to wire in an XB chip to your console (using all the terms but without a chart or graph). Everyone (except those five or six) was bored to tears. I couldn't understand why anyone even came to the meetings. I didn't join, though I belong to quite a few groups.

When I went back to M.U.N.C.H. I noticed our meetings were getting like that (though not yet as bad).

When meetings started to get down to three and four members present, I knew drastic changes had to take place.

So what did we do to renew membership and keep it active?

First, we started having user workshops. Things we normal types wanted the computer for. Most people want to do something with wordprocessing or graphics. (PRINT SHOP is, after all, the most popular home computer program on the market - for other computers.) Desktop publishing it's being called, and it is just that. We started giving workshops on FUNNELWEB and PLUS! and CFS and TI-ARTIST and FONTWRITER, primarily, because people owned these programs or were seriously considering getting them, and they wanted to know how to use them. They wanted to go slowly and in small groups and ask lots of questions and have things shown a few times. People have a mistrust of manuals, no matter how simple. (The ones that are very simple seem too wordy; the ones that are thin seem to assume too much knowledge on the part of the user.) People like to see things in operation. They don't care how the TV or the car or the microwave or the washing machine work. They only want to be able to use the things. For most people, this is also true of computers. And for the TI in particular because most purchasers bought it for home and as their first computer experience.

We tried to provide for these 99ers, but we first had to get them back.

We improved the newsletter: increased the number of pages, eliminated the repitious or irrelevant materials, tried to jampack it with goodies from all the exchange newsletters and add graphics and PROGRAMS TO TYPE IN whenever and wherever possible.

Next we mailed them to ALL former members inviting them back to the fold.

We had coffee and goodies available.

We greeted each new or returning visitor at every meeting and pulled them right into the pre-meeting group discussions.

And had signs made up. A batch was given to each member present to put anywhere and everywhere.

We increased our raffles; brought back our text library, our long-forgotten tape library and dubber, our disk library.

At each meeting we begin with a social time (to talk, eat, look at the stuff for sale, for loan, for raffle), pull everyone together for a general filling-in of what the workshops that night will be and a filling-in of what's happening in our computer's world. Lots of jokes and fellowship. Then we have a short, semi-formal meeting (president, treasurer, secretary) and conduct the workshops. Meetings begin officially at 7. Most members arrive by 6:30. We end abruptly at 9.

We gave a list of all members names and addresses and phones to all members.

There is much outside-the-club contact. Many members belong to other clubs, too, so there is a greater sharing. If members show an interest in Eproms, for example, they can bring it up at a meeting and request a workshop for those interested.

The heart and the brain of the user group (for ALL user groups) is the newsletter. Without it, there is no real user group. It is the connector of members. It is the communicator. It is the touchstone and signature of each club around the world. The newsletters are as individual and quirky as the editors whose remarkable dedication continues to turn them out. You can tell from the newsletter if the club is friendly and worth joining.

The main ingredients in successful user groups are the four F's: FUN, FELLOWSHIP, FOOD, AND FRIENDLINESS. When groups get away from these qualities, they're fading into the shadows. However, as M.U.N.C.H. is proof, with a little effort a group can leap back into the light.

[This is the last of a 3-part article on personal experiences in the TI world.]

HOW TO REPAIR AN ELECTRONIC INSTRUMENT

Reprinted from MADAREA
99er NEWS
via "The COMPUTER VOICE" SCCG

STEP 1:

Approach the ailing instrument in a confident manner. This will give the instrument the mistaken idea that you know something and that you are not afraid of it. It will also impress anyone else who happens to be looking, and if the instrument suddenly starts working again, you will be credited with the repair.

STEP 2:

Wave the service manual at the instrument. This will make it assume that you are ELECTRONIC familiar with the source of all knowledge, and start the instrument to thinking that there is even the slight possibility that you can read.

STEP 3:

In a forceful and direct manner, recite OHMS law or something equally technical sounding to the instrument (caution: before taking this step, be sure to consult a reliable source for the correct pronunciation of OHMS law and other technical words). This will intimidate the instrument and prove that you indeed know something. If this produces no immediate reaction, proceed to step 4.

STEP 4:

Jar the instrument. This is a progressive proceedure, starting with bouncing the instrument lightly on the bench, and culminating with droping the instrument from a height of three to seven feet (higher if the instrument is particularly fragile). Caution must be exercised however; although the drop method is a long standing recognized technique of instrument repair, one must be careful not to mar the floor, or the custodial staff will get really ticked off at you, in which case you are in big trouble.

STEP 5:

Brandish a large screwdriver in a menacing manner. This will badly frighten the instrument and demonstrate your intimate knowledge of the deadly short circuit technique.

STEP 6:

Using the screwdriver, pry the back off the instrument (even if it was designed to open from the front) and expose the innards. Choose a random location inside and stick in a tube (even if the instrument is totally solid state). This will accomplish two things: it will prove to those standing about watching that you are indeed intimately familiar with the design, and will also confuse the instrument greatly thereby increasing your psychological advantage.

STEP 7:

Make loud disparaging remarks about the designer of the instrument, the poor quality of the components, and the slipshod manner with which it was assembled. Use lots of expletives. This may serve to make the instrument feel sufficently guilty to start working again or get it so angry at you that it starts to work to spite you. Be sure to keep a finger on the instrument at all times, so that if it does start to work, you will get the credit, rather than look silly.

STEP 8:

If all else fails, make various comments on how your time is much too valuable to waste on this stupid thing and walk away, hoping to sneak out of the

WHAT IS A NIBBLE, ANYWAY?:

The following article is by Jim Swedlow of the 99/4A Users Group of Orange County, California:

This month I am going to try and explain all of the various number words we run across. With luck, after you finish reading this, you will have some understanding of bit, byte, nibble, word, hex, binary, and where -31952 really is in memory.

With luck.

Computers really think in binary. In this numbering system there are two digits, 0 and 1 (or, if you are a computer, off and on). While this works for your 4A, binary is cumbersome for humans. For example, in binary 41,576 is 1010001001101000. Hex, or hexadecimal, has sixteen digits from zero to F. Here are the first sixteen numbers in binary, decimal and hex:

BINARY	DECIMAL	HEX	BINARY	DECIMAL	HEX	BINARY	DECIMAL	HEX	BINARY	DECIMAL	HEX
0000	0	0	0100	4	4	1000	8	8	1100	12	C
0001	1	1	0101	5	5	1001	9	9	1101	13	D
0010	2	2	0110	6	6	1010	10	A	1110	14	E
0011	3	3	0111	7	7	1011	11	B	1111	15	F

The next number would be b10000, or 16, or >10 (b means binary and > means hex).

One binary digit is a bit. Four bits is a nibble. So, b1010, or 10 or >A takes four bits or a nibble to express.

A byte is eight bits or two nibbles. With a bit you can count from zero to one. A nibble gets you from zero to fifteen. The range of a byte is:

BASE	Binary	Decimal	Hexadecimal
LOW	00000000	0	00
HIGH	11111111	255	FF

You have probably noticed the numbers 16 and 255 when using your TI. ASCII characters run from 0 to 255. There are sixteen colors (1 to 16, really 0 to 15). A string can be up to 255 characters long. And on and on.

Before tackling the next thing, a word, lets see if we can decode something. Lets take b10100 or >14. To convert either number to decimal, we need a method:

```
b10100 is b10000 plus b100          >14 is >10
   b10000 is 16 and b100 is 4          >10 is 16 and >4 is 4
   16 plus 4 is 20                     16 plus 4 is 20
   Hence, b10100 is 20                 Hence, >14 is 20
```

Further than that I cannot go in this space.

A word is sixteen bits or four nibbles or two bytes. The range of a word is:

BASE	Binary	Decimal	Hexadecimal
LOW	0000000000000000	0	0000
HIGH	1111111111111111	65,535	FFFF

But there are no negative numbers. Since we need them, we use something called twos compliment!(which is way beyond the scope of this column and this writer). I can tell you, however, the impact:

Hex Range	0000-7FFF	8000-FFFF
Decimal Range	0 to 32,767	-32768 to -1

Remember that >8000 is the next number after >7FFF.

Some examples: 7FFF = 32,767 8000 = -32,768 FFFF = -1 0000 = 0

Confused? So was I until I worked with it for a while. These conversion rules may help:

>>Any number less than or equal to 32,767 requires no conversion.

>>Subtract 65,536 from any number over 32,767.

>>Add 65,536 to any number less than zero.

This conversion process can be expressed in basic as follows: AD=AD+65536*(AD>32767)

If AD is the address, this returns the same number if AD is less than or equal to 32767. If AD is greater than 32767, the test returns true (-1) and a negative 65536 is added to AD. Try it on your computer.

Bottom line time. Suppose you see CALL PEEK(-31952,A,B). Where is -31952? Well, since it is less than zero, we add 65536 and get 33584 or >8330. NOW YOU KNOW!

ONE(+) LINERS FOR GRAPHING

by Tony Falco

Graphing is an important topic in mathematics education today. Computers and computer graphics will make it an even more important topic in the future. The following one and two (sorry!) liners can hopefully help out some middle school or high school students with some of the more basic concepts.

The first program gives practice with the process of plotting points. At the "X=,Y=" prompt the user enters two numbers separated by commas. The program will show that point if its coordinates will fit on the screen. Bear in mind the all the programs here are low resolution and plot only integer points.

The second one graphs the function Y=10*SIN(PI*X/14). Users can experiment with other functions by simply changing that expression. Try Y=ABS(5-ABS(X)) for example.

The third and fourth programs are very similar. The third one allows the user to experiment with sine waves. At the prompt you enter values for A and B, again separated by commas, and see how these numbers change the period and amplitude of the wave. The last one graphs shapes known as parabolas. At the prompt enter values of A,H, and K, once again separated by commas, and see how these values effect the shape, position and orientation. Values of A between -2 and 2 (decimal fractions are fine) work best. Again bear in mind that with low resolution many points do not get plotted, but this is exactly what one does with paper and pencil. We plot a few points and infer the position of the rest.

For a neat display run using CALL CLEAR :: RUN.

```
1 FOR D=1 TO 2000 :: NEXT D :: CALL CLEA
R :: INPUT "X=,Y=":X,Y :: IF ABS(X)>15 O
R ABS(Y)>11 THEN 1 ELSE CALL HCHAR(12,1,
43,32):: CALL VCHAR(1,16,43,24):: CALL H
CHAR(12-Y,16+X,30):: GOTO 1
```

```
1 CALL HCHAR(12,1,43,32):: CALL VCHAR(1,
16,43,24):: FOR X=-15 TO 16 :: Y=10*SIN(
PI*X/14):: CALL HCHAR(12+Y*(ABS(Y)<=11),
16+X,42-(ABS(Y)>11)):: NEXT X :: GOTO 1
```

```
1 CALL CLEAR :: INPUT A,B :: CALL CLEAR
:: DISPLAY AT(1,7):"Y="&STR$(A)&"*SIN(2*
PI/"&STR$(B)&")"
2 CALL HCHAR(12,1,43,32):: CALL VCHAR(2,
16,43,23):: FOR X=-15 TO 16 :: Y=A*SIN(P
I*X/B):: CALL HCHAR(12+Y*(ABS(Y)<=11),16
+X,42-(ABS(Y)>11)):: NEXT X :: GOTO 2
```

```
1 CALL CLEAR :: INPUT A,H,K :: CALL CLEA
R :: DISPLAY AT(1,7):"Y="&STR$(A)&"(X-"&
STR$(H)&")^2+"&STR$(K)
2 CALL HCHAR(12,1,43,32):: CALL VCHAR(2,
16,43,23):: FOR X=-15 TO 16 :: Y=A*(X-H)
^2+K :: CALL HCHAR(12+Y*(ABS(Y)<=11),16+
X,42-(ABS(Y)>11)):: NEXT X :: GOTO 2
```

From the MUNCH TI-dings

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